# Version Notes 2.3.28

✅ These are the notes for the Struts 2.3.28 distribution.

✅ For prior notes in this release series, see Version Notes 2.3.20

- If you are a Maven user, you might want to get started using the Maven Archetype.
- Another quick-start entry point is the **blank** application. Rename and deploy the WAR as a starting point for your own development.
- There is huge number of examples you can also use as a starting point for you application here

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**Maven Dependency**

```
<dependency>
  <groupId>org.apache.struts</groupId>
  <artifactId>struts2-core</artifactId>
  <version>2.3.28</version>
</dependency>
```

You can also use Struts Archetype Catalog like below

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**Struts Archetype Catalog**

```
mvn archetype:generate -DarchetypeCatalog=http://struts.apache.org/
```

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**Staging Repository**

```
<repositories>
  <repository>
    <id>apache.nexus</id>
    <name>ASF Nexus Staging</name>
    <url>https://repository.apache.org/content/groups/staging/</url>
  </repository>
</repositories>
```

## Internal Changes

- ⚠️ Possible XSS vulnerability in pages not using UTF-8 was fixed, read more details in S2-028
- ⚠️ Prevents possible RCE when reusing user input in tag's attributes, see more details in S2-029
- ⚠️ `I18NInterceptor` narrows selected locale to those available in JVM to reduce possibility of another XSS vulnerability, see more details in S2-030
- New `Configurationprovider` type was introduced - ServletContextAwareConfigurationProvider, see WW-4410
- Setting status code in `HttpHeaders` isn't ignored anymore, see WW-4545
- Spring `BeanPostProcessor(s)` are called only once to constructed objects., see WW-4554
- OGNL was upgraded to version 3.0.13, see WW-4562
- Tiles 2 Plugin was upgraded to latest available Tiles 2 version, see WW-4568
- A dedicated assembly with minimal set of jars was defined, see WW-4570
- Struts2 Rest plugin properly handles JSESSIONID with DMI, see WW-4585
- Improved the Struts2 Rest plugin to honor Accept header, see WW-4588
- `MessageStoreInterceptor` was refactored to use `PreResultListener` to store messages, see WW-4605
- A new annotation was added to support configuring Tiles - `@TilesDefinition`, see WW-4606
- and many other small improvements, please see the release notes

This release contains fix related to S2-028, S2-029 and S2-030 security bulletins, please read it carefully!

### Issue Detail

- JIRA Release Notes 2.3.28

### Issue List

- Struts 2.3.28 DONE
- Struts 2.3.x TODO

## Other resources

- Commit Logs
- Source Code Repository